

U.S. DISTRICT COURT
DISTRICT OF VERMONT
FILED

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF VERMONT

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CRAWFORD, and BILLY J. KNIGHT,)
individually, and on behalf of a Class of)
persons similarly situated,)

Plaintiffs)

v.)

SAINT-GOBAIN PERFORMANCE)
PLASTICS CORPORATION,)

Defendant.)

Case No. 5:16-cv-125

DECISION ON MOTION FOR CLASS CERTIFICATION
(Doc. 107)

Between April 15 and April 30, 2019, the court conducted hearings on two issues: admissibility of Plaintiffs' expert reports under *Daubert* and Fed. R. Evid. 702, and class certification under Fed. R. Civ. P. 23. The hearing included testimony of experts from both sides as well as the admission of extensive documentation.

The court has previously ruled in favor of the plaintiffs on most of the *Daubert* issues. (Doc. 300.) The same record provides the basis for the court's consideration of the class certification issues. *See In re Initial Public Offerings Sec. Litig.*, 471 F.3d 24, 41 (2d Cir. 2006) ("But even with some limits on discovery and the extent of the hearing, the district judge must receive enough evidence, by affidavits, documents, or testimony, to be satisfied that each Rule 23 requirement has been met.")

Before turning to the elements of Rule 23, the court recognizes the impact of the decision of the Supreme Court in *Wal-Mart Stores, Inc. v. Dukes*, 564 U.S. 338 (2011). In the majority opinion, Justice Scalia adopted the insight of law professor Richard Nagareda that

What matters to class certification . . . is not the raising of common “questions”—even in droves—but, rather the capacity of a classwide proceeding to generate common answers apt to drive the resolution of the litigation. Dissimilarities within the proposed class are what have the potential to impede the generation of common answers.

Id. at 350 (quoting Nagareda, *Class Certification in the Age of Aggregate Proof*, 84 N.Y.U. L. Rev. 97, 132 (2009)). The critical issue is not whether the pleadings define the claims in terms common to the class members. Instead, it is whether a contention raised by the plaintiffs can be answered in a manner that “will resolve an issue that is central to the validity of each one of the claims in one stroke.” *Id.* at 350.

Plaintiffs’ Claims

The court has already described the facts in detail in the prior *Daubert* decision. (Doc. 300.) In 1969 Chem-Fab Corporation (“Chem-Fab”) opened a plant in Bennington, Vermont for the purpose of applying Teflon to fiberglass cloth for use in building construction. In 1978, the plant moved to North Bennington and continued to produce the same product in the same manner. Saint-Gobain purchased Chem-Fab in 2000 and continued to operate the North Bennington plant until 2002 when it moved these operations to New Hampshire.

The Teflon solution used in the plants was water-based. In order to achieve proper dispersion of the Teflon throughout the solution, an additive known as PFAS was supplied as part of the solution. The fiberglass cloth was dipped in the solution. The wet cloth was exposed to several stages of increasing heat to remove the water and fuse the Teflon onto the surface.

Through the use of plant records, the parties have been able to make calculations about the total quantity of PFAS used by the Chem-Fab facilities. There is some disagreement as to the total quantity consumed by the plants, but in either account, the total amount of PFAS consumed over the course of more than 30 years of continuous operation was thousands of pounds. Plaintiffs' expert Dr. Philip Hopke calculated a range of 1,000 pounds per year for the Bennington plant and as much as 7,000 pounds per year for the North Bennington plant. (Ex. 37 ¶ 10.) In a report prepared for the Vermont Department of Environmental Conservation, the investigators estimated annual discharges of PFOA ranging from 50 pounds (1970) to 1,351 pounds (1998 and 1999). (Ex. N, Table 5-02.) Investigators retained by the defendant estimated annual discharges ranging from 13 pounds (1970) to 307 pounds (1998) with an average annual discharge of 145 pounds. (*Id.*)

The parties disagree about the fate of the PFAS within the Chem-Fab plant. Both sides agree that when heated, PFAS undergoes a chemical change into PFOA. If heated to a high enough temperature, the PFOA degrades into its constituent parts.

Plaintiffs' chemistry expert Dr. Hopke concluded that the PFAS underwent a chemical change to PFOA at the same time as the water in the Teflon solution evaporated and left the plant as water vapor. In his opinion, the PFOA left the plant with the water vapor. This process happened at the very early stages of manufacture and at temperatures too low to degrade the PFOA into its constituent parts.

Defendant's experts agree that the PFAS underwent a change to PFOA. In their view, the PFOA remained on the fabric until the very high heat "sintering" or fusion stage of the process. At the temperatures involved in that phase, the PFOA degraded in a harmless manner. In their view, a relatively small amount of PFOA escaped from the plants.

The plaintiffs trace the PFOA through the air and into the groundwater through the use of an air modeling expert (Gary Yoder) and a hydrogeologist (Donald Siegel, Ph.D.). The defense has introduced expert reports which criticize their methodology. The court has already found plaintiffs' experts to be reliable for purposes of Fed. R. Evid. 702. (Doc. 300.) The defense experts contend that the source of the PFOA contamination is either the operations of other companies in the locality, the use of common household products such as Gore-Tex clothing by residents, or seepage from the Bennington landfill.

Tests of private wells conducted in 2016 in an area of Bennington and North Bennington show elevated levels of PFOA in approximately 2/3 of the 606 wells tested. About half of the contaminated wells tested above 70 parts per trillion (ppt). (The state limit for potable water is 20 ppt.) Other wells within the area tested showed no contamination. The results of these tests, conducted at the request of the Vermont Department of Health, are not in dispute.

The contaminated wells are concentrated within an oval-shaped plume within an area which the state has designated the zone of interest and which the plaintiffs call the zone of contamination. The area at issue is relatively compact and comprises 15-20 square miles within the two towns. In large part as a result of this testing and the efforts of the Vermont Department of Environmental Conservation, Saint-Gobain has borne most of the expense of replacing residents' groundwater wells with municipal supply.

Defendant's investigators—a consulting organization called Barr Engineering—identified alternate sources of PFOA. The primary source was the Bennington landfill. Their report identifies other local industries which may have used products containing PFOA. In addition, wastewater treatment sludge was spread on fields in Bennington County. The sludge contained PFOA. (Ex. D.) The Barr report does not attempt to calculate the quantities of PFOA (except by

relative concentration in some cases) in the manner that it calculated the quantities of PFOA emitted from the Chem-Fab plants.

Turning to issues relating to damages, the parties agree that a claim of personal injury caused by exposure to PFOA should not form part of this litigation. The proposed exposure class excludes anyone who has a claim of personal injury.

There are two proposed classes: property owners and people with elevated blood levels of PFOA.¹ The property owners seek only a class damages award based on their calculation of the average increase in cost caused by the change to municipal water. The parties disagree over whether Plaintiff's economic expert has calculated these cost increases accurately.

The property owners intend to bring individual claims for the diminished value of their property due to the stigma of their location within the contaminated zone and the loss of the resource of potable groundwater. The court has already rejected their offer of proof of class damages for the loss of the shared resource of clean groundwater through payments to improve water supply in Bennington.

¹ Paragraph 77 of the Third Amended Complaint (Doc. 113) defines the two classes. The property class is defined as:

All natural persons, whether minor or adult, including any person claiming by, through or under a Class Member, who have interests in real property within the Zone of Contamination, including, but not limited to, those persons whose private water supply wells have been found to be contaminated with PFOA above 20 ppt.

The exposure class is defined as:

All persons, whether minor or adult, including any person claiming by, through, or under a Class Member, who, as of the time a class is certified in this case, have resided in the Zone of Contamination and have ingested PFOA-contaminated water in the Zone of Contamination and who have suffered accumulation of PFOA in the bodies as demonstrated by blood serum tests disclosing a PFOA level in their blood above the recognized background levels.

As class members, the exposure class seeks the cost of future medical testing to determine whether a member suffers from health problems such as certain cancers associated with exposure to PFOA. The parties disagree over whether medical monitoring is an appropriate legal remedy in any lawsuit as well as whether Plaintiffs can establish causation between PFOA and adverse health consequences.

With these claims and issues in mind, the court turns to the question presented by *Dukes*, which is whether these claims are likely to generate common answers justifying class action certification.

Elements of Rule 23

I. Rule 23(a) – Prerequisites

In order to certify a class, the court must consider all four sub-parts of Rule 23(a) and the relevant parts of Rule 23(b). The burden is on the plaintiff representatives to satisfy each element. *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 614 (1997); *Caridad v. Metro-North Commuter R.R.*, 191 F.3d 283, 291 (2d Cir. 1999) (overruled on other grounds by *In re IPO*, 471 F.3d 24 (2d Cir. 2006)). In seeking to conduct a rigorous analysis of each requirement of Rule 23, the court considers both the complaint and the evidence placed before the court through expert reports and other documents establishing the facts in the case. *Id.* at 292 (plaintiff must make some showing beyond the allegations of the complaint).

A. Rule 23(a)(1) – Numerosity

The requirement of numerosity distinguishes potential class actions from individual claims involving small groups of parties which can be resolved through joinder and consolidation.

In this case, plaintiffs allege that 2,150 properties lie within the zone of contamination and that 8,342 residents are potentially affected. Defendant neither objects to these calculations nor makes any specific arguments on the numerosity element. The court is satisfied that the class is sufficiently numerous to support certification and that it is not so large as to prevent fair and expeditious treatment of the claims.

B. Ascertainability

Although not expressed in Rule 23, courts have recognized the necessity of an objective method of ascertaining who is a member of the class. *See Manual for Complex Litigation* § 21.222 (4th ed. 2004) (“Although the identity of individual class members need not be ascertained before class certification, the membership of the class must be ascertainable.”).

In principle, determining who is in each of the two classes is not complicated. Membership in the proposed exposure class depends upon three criteria: residence in the zone of contamination, consumption of water containing PFOA, and elevated blood serum levels of PFOA. Following notice, people who choose to pursue medical monitoring will have to provide proof that they have lived within the zone, that they drank contaminated well water, and that they have elevated PFOA levels established through a blood test. The parties have not addressed the issue of notice directly. Defendant argues that it poses an unmanageable problem. The court notes that the PFOA controversy has received publicity within Bennington County already. A combination of mailings to property taxpayers, media publication and an appropriate website, amplified by the small talk which occurs in Vermont towns, may reasonably be calculated to provide notice of the formation of the classes.

Membership in the proposed property class may require some sharper definition. As the case has developed, there are two types of claims: increased water costs and loss of property

value through stigma. Claims for increased water costs are limited to people who have moved from wells to public supply and can prove in an individual case that their costs have risen.² These are owners and possibly some tenants. They do not include guests or people passing through. Claims for loss of property value would belong to owners.

The court and the parties are assisted in ascertaining who is in these two classes by the localized nature of the claim. It concerns portions of two towns located within a few miles of two plants which were known to use large quantities of PFOA. The contamination has already received a great deal of local press coverage. Establishing who qualifies for each class will require organizational work. It will not be difficult conceptually.

C. Rule 23(a)(2) – Questions of Law and Fact Common to the Class

As in *Dukes*, commonality lies at the core of the dispute over certification. From the defendant's perspective, differences among class members overwhelm any common issues. These include varying degrees of PFOA contamination in homeowners' wells and differences in age, health, and life experience among individuals. Plaintiffs respond that it is primarily common issues going to *liability* for which they seek certification:

Plaintiffs seek class certification of Defendant's *liability* for their common law property claims: nuisance, trespass, strict liability, and negligence. With the exception of the named Plaintiffs, who will prove their individual property damages—loss in property values, loss of use and enjoyment of their property, and annoyance, upset, aggravation and inconvenience from living and owning property in the Zone of Contamination—during the class trial, Plaintiffs intend to prove the property-based *damages* of the individual putative class members at a later stage of the litigation.

² The court is not blind to the possibility that there may be very few people in the “increased cost” class. In the history of public water supply, few people have chosen to disconnect their public source and return to a drilled well. The impediment to public water is most frequently the cost of connection, not the quarterly water bill. And the cost of maintaining and operating a well, a pump and a pressure tank can be high. But, looking ahead to a later section of this decision, these are matters for individual proof after the class portion of the case is concluded.

(Doc. 237 at 9.) In the case of the medical monitoring claim, Plaintiffs point to the common elements of elevated PFOA levels in blood and a common increase in the risk of contracting a disease in the future. (*Id.* at 16–17.) The court will consider the liability and the damages or remedy issues separately.

The common *answers* to questions of liability concern Chem-Fab and Saint-Gobain's role in causing the increase in PFOA contamination within the zone. A common answer to the liability issues might be:

- Chem-Fab caused the increased level of PFOA through unregulated discharge of PFOA into the atmosphere for 30 years.

Or, alternatively:

- Some source other than Chem-Fab is responsible for the elevated levels of PFOA within the zone of contamination.

The proof offered to reach these answers may involve complex issues of chemistry, air modeling, and hydrogeology, but the answers are common to all property owners and residents within the contamination zone. Within the range of environmental contamination cases, this one is simpler than most. A single industrial process operated for three decades by one corporation and its successor is claimed to be the source of an unusual chemical. The claim of contamination is limited to parts of two towns in the same state. It is concentrated in an area of a few square miles which both parties and the state regulators have mapped in detail. The defenses that PFOA is ubiquitous in trace amounts or that another company or the landfill is the true source apply with equal force to all class members.

The common answers concerning damages are not as easy to see. Plaintiffs have already removed most property-based damage claims from the class action. The court has excluded the

remedy of a special payment to one of the municipal water authorities from the case. All that remains for the property claim is the claim that the average cost of water goes up for people on municipal supply. Assuming liability, the issue becomes: how much should each class member receive to compensate for this increased cost? Using the *Dukes* formulation, a common answer is not available:

- A class member's damages depend upon the depth and expense of his or her well water supply, the cost of metered water, and his or her annual usage. The amount of these damages will vary from one household to another.

The award of damages to a class on the basis of evidence about average or projected data is generally error. The average is by definition incorrect to some degree in every case.

Awarding average damages unfairly prevents the defendant from challenging each claim in court. But in this case, there is no need to use an average calculation for the property class. The class members already have individual property claims which they may seek to adjudicate on an individual basis. The plaintiffs already intend to try these claims as individuals. At the same time that each class representative presents an individual claim for loss of property value, he or she can present an individualized claim for the added cost of metered water. These loss of value claims are going to be heard in any event in individual trials, and there is no justification for attempting to impose class treatment on individual claims of increased water bills.

The medical monitoring claim is the only class claim presented on behalf of the exposure class. It presents an easier case for commonality. The common features of the proposed class are elevated PFOA blood levels, residence within the zone of contamination, and no claim of injury or illness due to PFOA. In other words, the proposed class members show evidence of contamination of their blood without current symptoms of illness. In resolving this claim,

common proof as to the strength of the causal connection between PFOA exposure and future illness is likely to provide common answers. The answer after trial could be:

- The causal connection is strong and asymptomatic people exposed to PFOA will benefit from medical monitoring and early detection of illness.

Or the answer after trial could be:

- There is insufficient proof of a causal connection between exposure to PFOA and the onset of any illness. In addition, ordering additional tests and other forms of scrutiny will make some individuals worse through false test results and undue anxiety.

Both of these are common answers, applicable to all class members. Unlike an impermissible personal injury class, the exposure class members are similar because of the *absence* of current, relevant symptoms. In this sense, they share a common experience.

D. Claim-Splitting Concerns

The court now addresses the claim-splitting arguments raised by Defendant in several contexts, including commonality. It also has application to typicality under Fed. R. Civ. P. 23(a)(3) and adequacy of representation under Fed. R. Civ. P. 23(a)(4). The court will address these different aspects of the issue here in a single discussion.

The concern raised by the defense is that under longstanding principles of res judicata, a final judgment extinguishes future claims arising out of the same transaction or events. *See* Restatement of Judgments (Second) § 24(1) (“When a valid and final judgment rendered in an action extinguishes the plaintiff’s claim pursuant to the rules of merger or bar, the claim extinguished includes all rights of the plaintiff to remedies against the defendant with respect to all or any part of the transaction, or series of connected transactions, out of which the action arose.”). These principles apply to class members as well as individual litigants.

In this case, the exposure class may include individuals who will develop cancer and other conditions as a result of ingesting PFOA. Indeed, some named plaintiffs already suffer from high blood pressure and elevated cholesterol levels which are conditions allegedly associated with exposure to PFOA (as well as age, diet and a host of other factors). In Defendant's view, under principles of merger, entry of a final judgment ordering any relief to the exposure class would prevent a class member from suing for personal injury in a later individual action. This prohibition against filing more than one lawsuit concerning different aspects of the same controversy is often referred to as a rule against "claim-splitting."

The rule against successive lawsuits is not absolute. Prior to modern pleading standards and the adoption of the Federal Rules of Civil Procedure, parties were permitted to file sequential lawsuits asserting different forms of action. With modern pleading, parties are required to assert all possible claims arising from the same transaction or risk the effect of merger or bar. But "[w]hile the [prior] judgment precludes recovery on claims arising prior to its entry, it cannot be given the effect of extinguishing claims which did not even then exist and which could not possibly have been sued on in the previous case." *Lawlor v. Nat'l Screen Serv. Corp.*, 349 U.S. 322, 327–28 (1955). A member of the exposure class who has no known symptoms of an illness caused by PFOA has no basis on which to file a lawsuit for personal injury damages.

The Vermont legislature has provided protection against the application of res judicata for subsequent lawsuits seeking recovery from "noxious agents medically recognized as having a prolonged latent development." 12 V.S.A. § 518(b). In such cases, recovery in an earlier proceeding will not bar a second lawsuit "unless the plaintiff in the earlier action was actually awarded damages for the latent injury" or had sufficient information to establish a claim for a specific amount of damages. *Id.* Whether PFOA qualifies as a "noxious agent" for purposes of

§ 518(b) is an issue which will only arise if someone files a second lawsuit for a personal injury. But the statute is evidence of a policy concern, expressed by the state legislature, that claims should not be barred by a prior lawsuit if a person could not have known of her injury previously.

In addressing the scope of res judicata in this case, the court also has in mind the near-universal rejection of claims for compensatory damages for increased risk of injury due to environmental contamination. No such claim is made in this case. There is no basis for an argument that a personal injury plaintiff who files suit in the future has already received compensation in the form of a past payment for injury discounted by the likelihood of actually falling ill. Because the exposure claim is limited to the cost of medical monitoring, the “claim splitting” concern is that a later-filing plaintiff could have made a personal injury claim today and did not. This concern has led to the denial of certification by some courts and requires consideration here.

In *In re MTBE Products Liability Litigation*, 209 F.R.D. 323 (S.D.N.Y. 2002), the trial judge addressed the claim-splitting issue in a proposed class action against twenty oil company defendants brought by class representatives in four of the nation’s largest states (New York, Florida, California and Illinois). Among many reasons the court offered for denying certification was the potential conflict between absent class members with personal injury claims and the class representatives who sought only injunctive relief at the class stage of the litigation. (Individual damage claims were reserved for later.) As here, the court analyzed the issue as one of adequacy of representation.

The court began by recognizing that in the civil rights context, “courts generally allow plaintiffs in class actions to sue for injunctive relief on behalf of the class and then bring

damages claims in subsequent individual actions.” *Id.* at 339. The judge recognized that “most courts would probably extend the general rule developed in civil rights cases to tort classes.” *Id.* Nevertheless, the judge relied on a series of cases involving tobacco, MTBE and other products which held that the reservation of personal injury and damage claims may not be enforced in a later case. *See Thompson v. Am. Tobacco Co.*, 189 F.R.D. 544, 550 (D. Minn. 1999) (“Thus, even if the Court permits the reservation of issues in this case, whether a subsequent court would honor such a reservation is, at best, undeterminable at this time.”); *Feinstein v. Firestone Tire and Rubber Co.*, 535 F. Supp. 595, 606 (S.D.N.Y. 1982) (“But that improvement [of limiting class claims to breach of an implied warranty arising out of purchase of tires] . . . was purchased at the price of presenting putative class members with significant risks of being told later that they had impermissibly split a single cause of action.”); *Millett v. Atl. Richfield Co.*, No. Civ.A. CV-98-555, 2000 WL 359979, at *9 (Me. Super. Ct. Mar. 2, 2000) (“Moreover, there is a significant risk that any subsequent lawsuits filed by these class members against the defendant in this action would be barred by res judicata.”); *Small v. Lorillard Tobacco Co.*, 679 N.Y.S. 2d 593, 601 (N.Y. App. Div. 1998) (smokers who sued for repayment of the cost of their cigarette “will preclude all New York smokers’ chances of bringing potentially more lucrative damages claims for personal injury and emotional distress from nicotine addiction”). As these cases demonstrate, the existence of a conflict of interest depends upon an assessment today of whether a second court in the future would apply res judicata principles to bar a claim of personal injury.

The court discounts the likelihood of a res judicata bar for personal injury claims in this case for several reasons. First, the only relief sought on behalf of the exposure class is injunctive. The class representatives seek an order from the court requiring the defendant to pay future costs of medical monitoring in an effort to reduce future injury. The claim is entirely

prospective and seeks no money damage award. As the court recognized in *In re MTBE*, class-wide injunctive relief does not generally bar subsequent damage claims. *See Hiser v. Franklin*, 94 F.3d 1127, 1291 (9th Cir. 1996); *Fortner v. Thomas*, 983 F.2d 1024, 1031 (11th Cir. 1993); *Norris v. Slothouber*, 718 F.2d 1116, 117 (D.C. Cir. 1983). This principle is recognized in Wright & Miller: “So an individual who has suffered particular injury as a result of practices enjoined in a class action should remain free to seek a damages remedy even though claim preclusion would defeat a second action had the first action been an individual suit for the same injunctive relief.” 18A Wright et al., *Federal Practice & Procedure: Jurisdiction* § 4455.2 (3d ed.).

Second, as a matter of Vermont substantive law, 12 V.S.A. § 512(b) may well apply to preserve a second claim for individual damages which was not previously adjudicated.

Third, the idea that individuals will be able to sue Saint-Gobain for individual personal injury damages is highly theoretical. The cost of proving through a team of expert witnesses that Saint-Gobain is the source of the PFOA contamination is very great. The additional burden of proving proximate cause of injury for conditions such as kidney or prostate cancer which are notorious for having multiple environmental and genetic causes is formidable. To date no one has filed such a case. The court is sensitive about the need to protect absent class members from the preclusion of future claims—but not at the expense of obtaining any relief at all.

Fourth, even the *MTBE* decision recognizes that class actions have a role to play in the adjudication of environmental torts. In the context of Fed. R. Civ. P. 23(b)(2), the court recognized the appropriate role of class actions in localized settings. “Where courts have granted Rule 23(b)(2) certification in the tort context, they have done so where a class seeks only medical monitoring and where a single actor or few actors have caused a discrete accident or

contamination of an isolated geographic area.” *In re MTBE*, 209 F.R.D. at 342. The court is satisfied that claim splitting is not a barrier to class certification because the limited, injunctive relief sought by the exposure class is unlikely to bar a subsequent claim for personal injury.

With the departure of the claims for community-wide utility improvements as well as the claims for average increases in water costs, the property class is limited to a determination of liability. From the outset, the exposure class has been limited to a determination of liability plus the remedy of medical monitoring. As the case to be tried becomes more narrow and focused, the prospect of a conflict within the class diminishes. All property owners have the same interest in establishing liability for potential property losses, whether they pursue these claims or not. All persons demonstrating exposure to PFOA have the same interest in obtaining access to medical testing, whether they choose to make use of it or not. These are common interests which are free of potential conflict.

E. Rule 23(a)(3) – Typicality

The requirement of typicality is primarily concerned with the problem of conflicts of interest. “[The] ‘typicality’ requirement attempts to ensure that the representative parties’ (named plaintiffs’) interests are substantially aligned with those of absent class members.” 5 James Wm. Moore et al., *Moore’s Federal Practice–Civil* § 23.24[1] (2019). In this case, the representative parties’ claims are entirely typical of the remainder of the exposure and property class.

The exposure class consists of asymptomatic individuals with elevated PFOA blood levels. No treatment or compensation for injury is possible because these individuals have no identifiable illness. They have only a claim of increased risk of injury and seek only medical monitoring. The strength of their claims does not depend on individual features of their health or

the level of their exposure. The claims are typical in the sense that they are identical, both within the group of representative plaintiffs and when compared to the larger body of individuals with positive blood tests for PFOA and an absence of symptoms of illness.

The defendant argues that an individual's risk of illness depends not only on his or her exposure to PFOA—which varies in intensity—but also on “the individual's background risk and general health, which vary due to the many ‘considerable individual differences’ acknowledged by [plaintiff's expert] Dr. Ducatman.” (Doc. 215-1 at 3.) It is undeniably true that every person's health profile, including his or her risk of developing cancer or high blood pressure during pregnancy or any of the other conditions associated with PFOA varies. But the *answer* for which Plaintiffs advocate does not vary from one plaintiff to the next. Plaintiffs seek only testing and monitoring, which varies little between individuals. There are only so many tests and medical assessments which can be ordered. With little difference among these, the claims for additional monitoring are not just typical—they are essentially the same (with the exception of tests related to pregnancy which would never be offered to men or to women beyond menopause.)

Defendant also argues that certain plaintiffs already suffer from elevated cholesterol, which is a condition associated with PFOA exposure. By middle age, many Americans suffer from the same thing. The prevalence of this common condition does not create a meaningful difference within the exposure class since all named plaintiffs seek monitoring for the more serious conditions such as cancer which none have today. If a class member already suffers from elevated cholesterol, she can skip the test or, more likely, receive confirmation that the condition is still present. This is not a reason to exclude her from the class of people seeking testing for less common conditions.

F. Rule 23(a)(4) – Representative Parties will Fairly and Adequately Protect the Class

This final qualifying factor goes both to the potential for conflicts of interest among class representatives and the qualifications of counsel.

Plaintiffs' counsel have formed a highly experienced consortium of national environmental lawyers, Vermont-based environmental lawyers, and a local law firm from Bennington. All three firms are well-respected and the individual attorneys have performed at a very high level before this court in this case. The court has great respect for counsel on both sides of the case. There is good reason to be confident that Plaintiffs' counsel will fairly and adequately protect the class as a whole.

The class representatives are mature people who appear to have accepted their role with patience and fortitude. They have all subjected themselves to searching discovery. No claim of conflict of interest or misconduct is pressed against any one of them. None stand to gain any special advantage through their participation in the lawsuit. They appear to be a broadly representative group of plaintiffs who will represent the class interests fairly.

The court has already discussed at length the reasons why differences in individual health profiles among named plaintiffs do not create conflicts or a risk of inadequate representation. On behalf of the exposure class, all seek the same thing. No one will get special benefit from being excluded from the high cholesterol test. Their interest in obtaining monitoring for themselves and their fellow members is substantially the same and creates no risk that they will inadequately represent the class as a result of individual characteristics. Similarly, no member of the property class will get a special benefit from serving as class representative. All have the same interest in proving liability to enable subsequent damages trials on an individual basis.

II. Rule 23(b) – Types of Class Actions

Turning to the Rule 23(b) analysis, the court starts with two general observations. First, the recognition that it is the search for common *answers* to the issues in the case directs the court's inquiry even more strongly in the Rule 23(b) discussion. With the qualifications of the plaintiffs as class representatives resolved, Rule 23(b) raises directly the question of what types of cases are appropriate for class treatment. The court seeks again to focus on the nature of the *answers* which the evidence may generate.

Second, as the case has developed before the court, it is clear that the positions of both sides have strengths and weaknesses and that these are to a large degree reciprocal. Defendant has not yet disclosed a strong defense on liability. To be fair, the case has not reached a merits determination. The defense may have additional evidence that Chem-Fab was not the source of the PFOA contamination that it has not yet shared with the court. But the evidence to date is that the two Chem-Fab facilities consumed large quantities of PFOA over three decades and emitted water vapor and other gases in quantities great enough to generate odor complaints from residents. To date the defense has not identified a likely alternate source for *airborne* contamination by PFOA. It has directed attention to the Bennington landfill as a potential source of seepage into groundwater. It has also argued that the PFOA contamination originates in the general persistence of background levels of contamination of PFOA. These are issues which apply generally to all residents within the zone of contamination.

The plaintiffs have difficulties of their own. Their problems are located in the damages portion of the case. Most of the potential damage claims are not included in the class action. Plaintiffs excluded individual personal injury damages from the class claims for legal reasons. They made a strategic decision to exclude diminution of property value from the class portion of

the case. The court has effectively dismissed the claims for generalized grant payments to the Bennington water utility and excluded the claims for increased water bills from the class action. What remains is the class claim for medical monitoring. All other damage claims are either excluded from this litigation altogether (personal injury claims for disease caused by PFOA) or reserved for individual damages trials (loss of value and added costs of obtaining water).

As this discussion indicates, the class portion of the litigation has developed into an issues class focused on whether Defendant has liability for the increased levels of PFOA across the zone of contamination. The court analyzes the property claim as a Rule 23(c)(4) issues class because no damages claim remains triable as a class issue. The court analyzes the exposure claim as a Rule 23(b)(2) claim for injunctive relief (medical monitoring) because Plaintiffs seek a court order requiring Defendant to take specific steps to safeguard the future health of the class.

A. Property Class Claim—Rule 23 (c)(4)

Rule 23(c)(4) permits the court to identify specific issues for class certification. The court must still determine whether the requirements of F.R.Civ.P. 23(b)(3) are met. Satisfying these requirements, however, is altered by the narrowed scope of the issues, most frequently as in this case the liability issues, that are identified for class resolution. See *Castano v. American Tobacco Co.*, 84 F.3d 734, 745 n.21 (5th Cir. 1996) (“The proper interpretation of the interaction between subdivisions (b)(3) and (c)(4) is that a cause of action, as a whole, must satisfy the predominance requirement of (b)(3) and that (c)(4) is a housekeeping rule that allows courts to sever the common issues for a class trial.”); *Johnson v. Nextel Communications Inc.*, 780 F.3d 128, 138 (2d Cir. 2015) (“Common issues – such as liability – may be certified, consistent with Rule 23, even where other issues – such as damages—do not lend themselves to classwide proof.”).

1. Questions of Law or Fact Predominate

As noted above, Plaintiffs define the property class as:

All natural persons, whether minor or adult, including any person claiming by, through or under a Class Member, who has interests in real property within the Zone of Contamination, including, but not limited to, those persons whose private water supply wells have been found to be contaminated with PFOA above 20 ppt.

(Doc. 113 ¶ 77.) Plaintiffs sue on theories of nuisance, trespass, negligence, strict liability on the basis of ultra-hazardous activities, and statutory liability under the Groundwater Protection Act.

(Doc. 107-1 at 17.) The common element of each of these legal theories is that Chem-Fab and Saint-Gobain were the source of contamination. Nuisance requires a showing of unreasonable and substantial interference with use and enjoyment of property. *Myrick v. Peck Elec. Co.*, 2017 VT 4, ¶ 4, 204 Vt. 128, 164 A.3d 658. Trespass rests on an invasion of plaintiff's exclusive possession of land. *John Larkin, Inc. v. Marceau*, 2008 VT 61, ¶ 8, 184 Vt. 207, 959 A.2d 551. Negligence in this case requires a showing of a duty not to contaminate, breach, causation and damages. Strict liability effectively replaces duty and breach with strict liability for causing harm through ultra-hazardous activities. The statutory liability under the groundwater statute arises from unreasonable harm in altering the quality of groundwater. 10 V.S.A. § 1410.

The common element in each legal theory is that liability requires proof that Chem-Fab and Saint-Gobain were the source of the contamination. Plaintiff's theory of the case is that the source is airborne particles emitted by the two plants. This theory is the same for each cause of action. If Plaintiffs persuade the fact-finder that the elevated levels of PFOA contamination resulted from airborne discharge, then the damages portion of the property claim will be determined by individualized trials. At those trials, Plaintiffs will have to prove that they lost property value or incurred increased expenses or suffered other consequential damages due to the

airborne contamination and not for other reasons. Plaintiffs will also have to prove the quantum of damages.

Dividing the lawsuit into liability and damages portions solves multiple problems. The first is practical. The airborne discharge claim depends upon three experts and is opposed by at least as many more. The liability case includes principles of chemistry, air modelling and hydrogeology. No single property owner could ever shoulder the financial burden of proving such a case by herself.

But the advantage is not merely pragmatic. Airborne pollution is inherently general or “class-wide.” It settles on everyone. No one can identify the year or the stack from which his particular contamination originated. This may give rise to difficult causation problems in cases involving multiple defendants. It is easier when there is only one alleged source of contamination and the contaminant is an unusual compound not found in nature.

Individual resolution of the damages claims solves a second problem. If the defense is that the PFOA never left the factory stacks because of the high level of heat in the treatment process, that is a defense which is common to all plaintiffs and can be resolved through determining the source and extent of airborne pollution. Similarly, if the defense is that PFOA is found in all corners of the world and that the concentration in Bennington is part of the general dispersion of the compound, that is a question which is also common to all plaintiffs. These are questions best answered through class-wide evidence.

As in *Dukes*, the critical issue for certification is whether liability can be resolved through an answer that applies to the class as a whole. Liability depends primarily on whether Defendant is the source of the contamination. The answer to that question may be:

- Yes. Airborne particulate from the two Chem-Fab plants settled over the zone of contamination over the course of three decades and made its way into the groundwater. Over 30 years, the plants discharged many tons of PFOA. This particulate is the primary source of contamination in the plaintiffs' groundwater.

The answer may also be:

- No. There was little or no airborne discharge from the Chem-Fab plants. PFOA is found throughout the world and the levels of PFOA in the zone of contamination suggest nothing greater than the accumulation of the substance through worldwide distribution and the local use of household products containing traces of PFOA.

Other sources such as local businesses or the Bennington landfill are the more likely sources of contamination.

Either answer is a common answer in the sense that it applies equally to all plaintiffs and their property claims.

The defense raises concerns that some individuals may have brought home PFOA on their clothes after work. Others may have used household products containing PFOA such as fabric sprays containing Teflon. But to date no one has argued that these exposures are sufficient to contaminate groundwater. Because the property claims are tied to groundwater contamination, allegations that residents were exposed to PFOA at work and through consumer products do not alter the common answers about the source of the groundwater contamination. If the question arises in an individual case, it could be addressed as part of the individual trial on damages. But at this point, it seems clear that the answer to how the groundwater became contaminated lies in a common body of evidence about practices at the Chem-Fab plant.

This case is one in which generalized evidence will resolve the liability issues. The facts put forward by the defendant do not suggest that these issues vary from one property to the next. Put as clearly as possible, either Chem-Fab is the primary source of contamination or it is not. This question is fairly answered on the basis of the same evidence for all members of the property class.

2. Superiority of a class action

A class action on the liability issue of whether St. Gobain is liable for property claims is superior to a series of individual claims both because of the efficiency of resolving the issue once on the basis of the law of a single state (Vermont) and a single factual record. This case is not one in which variations in state law or other differences between individual claims militate against class treatment. To the court's knowledge, no one other than the named plaintiffs here has brought an action against defendant for the alleged contamination. The cost and complexity of proving the liability case for a single property are prohibitive. Instead, this case presents an opportunity to "achieve economies of time, effort, and expense and promote uniformity of decision as to persons similarly situated." F.R.Civ. P. 23, Advisory Committee Notes (1966). Through elimination of individual damages claims from the property class trial, the remaining issues lend themselves to a common trial on liability.

B. Medical Monitoring Claim – Rule 23(b)(2)

In approaching the issue of certifying the medical monitoring claim, the court relies heavily on the discussion of the issue in the *Manual for Complex Litigation*. The Manual distinguishes between medical monitoring relief built around a system of court-ordered testing and those which consist of individual payments to class members. "Rule 23(b)(2) generally

applies when the relief sought is a court-supervised program for periodic medical examination and research to detect diseases attributable to the product in question.” *Manual for Complex Litigation* § 22.74 (4th ed. 2004). Rule 23(b)(3) applies to the direct payment model. In this case, Plaintiffs seek a court-ordered testing program. Except for minor incentive payments, a payment-based program has never been proposed. Accordingly, the court will follow Rule 23(b)(2) in addressing the medical monitoring claim.

The court has not ruled on the availability of medical monitoring under Vermont law. Because so much of the case appears to turn on this issue, the court postponed deciding the question until a full summary judgment record was available. It has been helpful to put this issue off as the case has developed. As the court sees it, the summary judgment motion will have at least two components. The first is whether the remedy is available at all. This is a legal issue. The second is whether the record in this case, viewed in the light most favorable to the plaintiffs, would support an order requiring medical monitoring in some form. This is a mixed question of law and fact. These are questions for another day. In handling the class certification issue, the court assumes that the remedy is available as a matter of law and that plaintiffs have the record evidence to prove that medical monitoring is beneficial and otherwise appropriate.³

³ Because the court is not ruling today on the existence of a medical monitoring remedy under Vermont law, the decision of the Fourth Circuit in *Rhodes v. E.I. du Pont de Nemours & Co.*, 636 F.3d 88 (4th Cir. 2011), provides little guidance. In *Rhodes*, the court held that individuals exposed to PFOA who had not sustained an identifiable injury or illness could not assert common law claims for nuisance, negligence, trespass or battery despite the presence of PFOA in their blood supply. Under West Virginia law, injury is an essential element of these torts. Although West Virginia recognizes a separate tort for medical monitoring, the plaintiffs had previously dismissed these claims and lacked standing to appeal the denial of certification on the statutory medical monitoring claim. *Rhodes* is an important case on the question of whether a medical monitoring claim exists under state law, but it provides no guidance on the issue of class certification.

Rule 23(b)(2) authorizes class certification when “the party opposing the class has acted or refused to act on grounds that apply generally to the class, so that final injunctive relief . . . is appropriate respecting the class as a whole.” Fed. R. Civ. P. 23(b)(2). The rule has two express elements: “Acting on grounds that apply generally to the class” and “the appropriateness of injunctive relief.” A third requirement of “cohesiveness” has developed through case law. *See Barnes v. Am. Tobacco Co.*, 161 F.3d 127, 143 (3d Cir. 1998) (“While 23(b)(2) class actions have no predominance or superiority requirements, it is well established that the class claims must be cohesive.”) Cohesiveness is another way of addressing the requirement of predominance of questions of law or fact common to class members. *See Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 623 (1997) (“The Rule 23(b)(3) predominance inquiry tests whether proposed classes are sufficiently cohesive to warrant adjudication by representation.”).

The court has no difficulty identifying actions by the defendant that apply generally to the class. These actions are the alleged release of PFOA by the defendant over many years. *See Rowe v. E.I. duPont de Nemours & Co.*, No. 06-1810 (RMB), 2008 WL 5412912, at *11 (D.N.J. Dec. 23, 2008) (“DuPont’s conduct is ‘generally applicable’ to both classes, as DuPont has allegedly released PFOA into the water sources used by (or at least intended for the use by) members of both classes.”). Second, medical monitoring claims are commonly considered to be injunctive claims for purposes of Rule 23(b)(2) when the relief sought is court-ordered monitoring. *See Barnes*, 161 F.3d at 132 (“Plaintiffs seek the establishment of a court-supervised program through which class members would undergo periodic medical examinations in order to promote the early detection of diseases caused by smoking. This portion of plaintiffs’ request is the paradigmatic request for injunctive relief under a medical monitoring claim.”)

Courts have denied claims for medical monitoring on cohesiveness grounds. In *Rowe*, for example, the district court rejected certification in a case involving ground water contaminated by PFOA which is very similar in many respects to the present case. The court applied New Jersey law, which provided for medical monitoring upon proof of significant exposure to PFOA, toxicity, risk of serious disease, increased risk to the class members, the positive value of early diagnosis, and testing different from regular care. The court found that “three of these elements could be proven by common evidence—namely, the toxicity of PFOA, the seriousness of the diseases caused by PFOA exposure, and the value of early diagnosis of these diseases.” *Rowe*, 2008 WL 5412912, at *11. Because the proposed class members lacked evidence of significant exposure to PFOA, their projected and estimated exposure levels were insufficient “to show that significant exposure can be proven on a class-wide basis.” *Id.* at *16. Because the exposure was only estimated, plaintiffs were unable to identify when plaintiffs “suffered an actual increased risk of disease in order to merit recovery in the form of medical monitoring.” *Id.* at *18.

The factor which distinguishes the present case from *Rowe* is that the plaintiffs in this case have already undergone blood serum testing for PFOA. Unlike the *Rowe* plaintiffs, the proposed class consists of individuals with elevated blood serum levels. The court in *Rowe* sharply criticized the use of a risk model in place of actual testing. *See id.* at *14 (“Plaintiffs could have conducted blood serum tests of the proposed class members to determine whether they indeed have elevated levels of PFOA above the general population, which is useful in determining historical exposure.”). In contrast, in this case the exposure class includes only people who have PFOA tests above background levels. In a very concrete sense, the members of the proposed class are similarly situated by virtue of their lab results.

The court turns again to the issue of common answers. For purposes of medical monitoring, these answers might be:

- An elevated PFOA test is an important indicator of an increased risk of certain cancers, liver disorder and other conditions.

An alternative answer might be:

- There is no meaningful correlation between an elevated PFOA test and future disease.

These are merits questions, but the answers do not vary based on individual differences among subjects. These answers which are derived from population data are common to all class members who are not known to have disease.

Similarly, a trial would provide other common answers:

- The PFOA test itself is sufficiently unusual that it is not readily available through an existing primary care relationship. The subsequent increased scrutiny differs significantly from what every other patient of the same age would receive.

Or, alternatively:

- The PFOA test is clinically meaningless because the great majority of patients are already monitored for liver function, high cholesterol, cancer and the other conditions associated with PFOA.

As this discussion illustrates, these are “cohesive” answers which apply to patients generally.

The court is not persuaded by Defendant’s assertion that people vary greatly and that as a consequence, no plan for medical monitoring is feasible. The members of the proposed class are obviously all different, but they are similar in the respects that matter for purposes of the claim. None are known to have the diseases associated with PFOA. (There would be no purpose in monitoring a person actually suffering from the illness at issue.) All have elevated PFOA levels.

All can identify a time when they ingested well water within the zone of contamination. The court is satisfied that their claim for injunctive relief in the form of a medical monitoring order is sufficiently cohesive as to meet the criteria of Rule 23(b)(2).

III. Other Defense Arguments Against Certification

The court turns now to some of the specific arguments raised by Defendant. Several of these concern potential differences among class members which threaten the similarity of their positions.

A. Other Exposure to PFOA

It is probable that some class members were exposed to PFOA through their work or in some other way unrelated to drinking well water from the zone of contamination. PFOA was commonly used for about 50 years in many industrial applications. Some members of the proposed class may have been employed at Chem-Fab.

The presence of other contributing causes is generally not a defense under conventional tort principles. In an individual case of nuisance, the likelihood that other sources may have contributed to contamination does not bar recovery. *See* Restatement (Second) of Torts § 840E (1979) (“Except as it may affect the character of the locality, the fact that other persons contribute to a nuisance is not a bar to the defendant’s liability for his own contribution.”). Defendant remains free to prove that its contribution was negligible in amount or otherwise inconsequential. But the presence of another potential source such as workplace exposure is possible in the case of any case of environmental contamination. If it barred injunctive relief, the court would be unable to order relief in virtually any case of this nature.

B. Individual Characteristics

Defendants correctly observe that courts have denied certification of medical monitoring classes in cases in which individual characteristics and behavior predominate. In *Barnes*, class treatment was denied for a million-member class of Pennsylvania smokers. One of several bases for the ruling was that the defendants' role in exposing each class member to tobacco (causation) as well as defenses such as comparative negligence required individualized proof. *See Barnes*, 161 F.3d at 143–46. These concerns are significant in the case of purposeful activity such as smoking. They are not relevant to an environmental tort in which residents' conduct played no role in the contamination of groundwater. *Barnes* also denied class certification of medical monitoring because each smoker's monitoring needs varied on the basis of health history. "In order to prove the program he requires, a plaintiff must present evidence about his individual smoking history and subject himself to cross-examination by the defendant about that history." *Id.* at 146.

The medical monitoring remedy proposed here differs from the immense classes proposed in cases like *Barnes* and *Amchem*. Whether a person has an elevated level of PFOA can be determined through a specific test. This test is not a conventional part of primary care. At the hearing, Plaintiffs' expert Dr. Ducatman raised questions about whether a primary care physician would know where to send blood for such a test and whether a PFOA test can be obtained at a reasonable cost for an individual. Once an elevated level is determined, the conditions for which Plaintiffs' experts seek assessment are few in number. Blood test results play a large role in monitoring for these conditions.

As the court has come to understand the medical monitoring problem, the first step would be to offer the PFOA test to any resident, past or present, in the zone of contamination. This

will require notice, likely through publication and a website. Building on the work of the Vermont health department, a number of residents who have not already been tested will appear to have blood drawn. The zone of contamination is not a large area and Bennington and North Bennington are small communities. Individuals who qualify by residence, access to well water, and elevated blood levels will qualify for screening that does not duplicate their current primary care. The court has expressed skepticism about the need to establish a stand-alone clinic or medical office when Bennington County is already served by a hospital and family physicians.

The medical monitoring proposal raises questions which are more generalized than individual. These include:

- Which residents have elevated PFOA levels?

History and individual behavior are less important than the results of a blood test offered in the same manner to all residents.

- For which conditions are these residents at increased risk?

This is an issue which can only be answered through generally applicable means. There is no test or exam that tells us whether an individual will contract one of these conditions. But the increased incidence across a population can be measured.

- Is there anything plaintiffs can do to ameliorate the risk?

Early detection is the only course either side proposes. PFOA is no longer in use, and the plants have closed. The well water has been replaced with uncontaminated sources. Whether early detection is possible or beneficial is a trial issue, but it is plainly not a disqualifying, individualized remedy which is good for some and not others.

- How can plaintiffs avoid duplicating care already in place?

Since testing rests in the hands of medical professionals, an explanation that the remedy is for additional testing not routinely provided is clear enough. The remedy of additional testing is not tailored to the relationship each class member has with his or her physician or their health history beyond exposure to PFOA. Defendants remain free to prove that the remedy is unnecessary or positively harmful. But these too are objections that apply to the class broadly.

As this discussion indicates, the court is satisfied that the medical monitoring issues presented in this case do not impermissibly involve the parties and the court in individualized determinations in the class setting. Instead, the problem is one of public health requiring remediation by general measures designed to apply broadly. Individuals will choose whether to seek monitoring, but when they do the program offered will be the same for all.

C. Statute of Limitations

The Vermont Department of Environmental Conservation in concert with Defendant began to test wells for PFOA in 2016. (Ex. D at 18.) This action was filed on May 6, 2016. The shortest limitations period that could apply is the three-year period for injuries to the person or property. 12 V.S.A. § 512. Defendant does not suggest that anyone knew of PFOA contamination to the groundwater before 2016. Instead, it argues that the history of complaints of strong odor from the plants may have placed some residents on sufficient notice to commence the running of the statute of limitations for bodily injury in the 1990s when these complaints were at their peak. (It appears that there is no statute of limitations claim for the property claims which arise from the alleged stigma resulting from publicity about the discovery of PFOA in well water.)

The merits of this defense are not before the court. For purposes of certification, this is not a defense which is likely to require individualized proof. Discovery of a wrong under

Vermont law means discovery of the injury, its cause and the existence of a cause of action. *Lillicrap v. Martin*, 156 Vt. 165, 176 (1989). Defendant's proffer that some residents were sickened by odors from the Chem-Fab plants is unlikely to support a statute of limitations defense that they had a basis for knowing that their groundwater had been contaminated by PFOA or that the compound had accumulated in their bodies. Defendant remains free, of course, to develop this defense factually, but the record before the court provides no basis for believing that the defense will succeed with respect to some members of the class and not with others.

D. Particularized Evidence Concerning Transport

Defendant opposes certification because a property-by-property inquiry is needed to determine the source of contamination for each well. Defendant cites trial court decisions where class certification was denied. *See Fisher v. Ciba Specialty Chemicals Corp.*, 238 F.R.D. 273 (S.D. Ala. 2006) (insecticides); *Martin v. Shell Oil Co.*, 198 F.R.D. 580 (D. Conn. 2000) (gasoline additive MTBE leaking from underground storage tank). Like this case, *Fisher* and *Martin* concerned a single alleged source of contamination: a service station in the case of *Martin* and a manufacturing plant in the case of *Fisher*. These cases are different, however, because class certification was denied on grounds not present here.

In *Fisher*, class certification was denied because three of the four class representatives were not members of the class and the fourth lacked standing. *Fisher*, 238 F.R.D. at 297–98. In addition, membership of the class was not defined with enough certainty. *Id.* at 302. As if this were not enough, the trial court also took the plaintiff class to task for failing to establish a predominance of common issues. Air transport of the insecticide was not established for some plaintiffs: “[P]laintiffs have come forward with no scientific testimony under which these chemicals would have uniformly blanketed the area of concern.” *Id.* at 307. In contrast, the

evidence from both sides in this case is that at least three tons of PFOA were released into the air. (Ex. N, Table 5.02 (Barr estimate of stack emissions of PFOA).) And the air model used by Plaintiffs and the Vermont Department of Environmental Conservation provides a comprehensive theory of transport and dispersion common to all plaintiffs.

Similarly, in *Martin*, the plaintiffs failed to establish numerosity because no one other than the two named plaintiffs appeared to take any interest in the controversy. With respect to commonality and predominance, the two plaintiffs claimed very different levels of contamination which suggested to the court that “resolving the questions of how the MTBE traveled to each of the plaintiffs’ properties and whether there is another source will likely differ as to different sites.” *Martin*, 198 F.R.D. at 592.

The issues of source and transport in this case have far more in common than the claims in *Martin* and *Fisher*. The plaintiffs have developed a sophisticated scientific theory of transport which follows the PFOA from the plants into the groundwater. There is no dispute that industrial levels of PFOA left the plant in the form of particulate or that as a chemical which persists in the environment and does not bind to organic matter, PFOA particles will find their way into the groundwater. This is a theory which is common to all plaintiffs living within the plume defined by testing.

The defendant has an alternate theory of contamination which is that the PFOA leached out of the landfill and spread across the plume as surface water (leachate) descended into the groundwater. Other industrial and consumer uses of PFOA contributed to the spread of the chemical. This is reasonably considered a defense common to all plaintiffs. Defendant does not single out individual properties as subject to contamination from the landfill or from other products containing PFOA. Rather, it argues more generally that “[c]ausation . . . is

individualized due to property-specific issues concerning if, how, when, and from where PFOA reached the property.” (Doc. 215 at 37.)

The defense that the PFOA came from other sources depends on common proof in much the same way that the plaintiffs’ claim does. Neither side can peer beneath the earth and trace the movement of groundwater. Neither side has test data from before 2016 for PFOA concentrations. Each side points to sources which apply to the zone of contamination generally. Whether the source is the landfill or the Chem-Fab plants, the inquiry is broadly similar:

- Was PFOA present at these alleged sources?
- Did it leave the plant or the landfill?
- Could an alternative source actually account for the concentration of PFOA across the zone of contamination?

Because the spread of PFOA has been gradual and until recently undetected, the positions of the parties on source and transport can only be addressed through modeling and the reconstruction of natural processes like the movement of wind and underground water. These are questions for which it is reasonable to anticipate common answers. These are not questions in which the individual circumstances of each plaintiff predominate.

CONCLUSION

The court GRANTS the motion to certify the exposure class under 23(b)(2) and the property class for purposes of liability only under Rule 23(c)(4). (Doc. 107.)

The next step in the litigation is to resolve by motion whether the proposed remedy of medical monitoring is available as a matter of Vermont law in general and in particular on the

factual record in this case. The court will convene a pre-trial conference to address a briefing schedule and to plan for the remaining stages of the case.

Dated at Burlington, in the District of Vermont, this 23 day of August, 2019.

A handwritten signature in black ink, consisting of a large, stylized 'G' followed by 'W. Crawford'.

Geoffrey W. Crawford, Chief Judge
United States District Court